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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,994	07/07/2003	Yen-Hsi Lin	87391.0200	9823
24504 7590 09/12/2007 THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP 100 GALLERIA PARKWAY, NW STE 1750 ATLANTA, GA 30339-5948			EXAMINER NILAND, PATRICK DENNIS	
			ART UNIT 1714	PAPER NUMBER
			MAIL DATE 09/12/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/612,994

Applicant(s)

LIN, YEN-HSI

Examiner

Patrick D. Niland

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 8/2/07.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 26-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 26-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 9/5/07
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/2/07 has been entered.

The amendment of 8/2/07 has been entered. Claims 26-34 are pending.

2. The amendment filed 8/2/07 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The material added to the specification by the amendment filed 12/1/06 and included in the amendment of 8/2/07 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

A. The amendment filed 8/2/07 containing the material of the amendment of 12/1/06 remains objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

The newly added material to page 5, line 23 to page 6, line 8 of the instant specification, particularly recitations denoted by "includes" or "including" which broaden the scope of the recited materials to include additional materials not described in the originally filed specification. This particular issue is not resolved by the applicant's arguments nor by the Bayer reference. No

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basis is seen for changing "sulfonate salt" to "sulfonate functional group". Regarding the amendment of page 6, line 21 to page 7, line 9 of the specification. The issue is not what is well known or what is taught by the cited Bayer reference. The Bayer reference argued is not incorporated by reference into the specification. The issue is what the applicant considered their invention to be at the time of filing. The originally disclosed invention does not make it clear that the applicant considered the newly recited material to be their invention nor that they had possession of the newly added scope at the time of filing. The new matter rejection is therefore maintained over the applicant's arguments. "Sulfonate functional group is addressed above.

Applicant is required to cancel the new matter in the reply to this Office Action.

3. Claims 26-34 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

A. There is not basis in the originally filed specification for the entire scope of the newly claimed "phase-change material having a polar functional group and a lipophilic moiety". The recited section does not support the full scope of the claimed limitations. There is no description of all "polar functional groups", the polar groups are not described as being "functional", and not all of the newly recited "lipophilic moieties" are described as being the instantly claimed invention. The newly encompassed scope remains new matter. The applicant's response is not persuasive in this regard for the reasons stated above.

B. There is not basis in the originally filed specification for modifying the claimed weight ratio of lipophilic monomer over waterborn polyurethane to recite “about” prior to “50%” in claim 26. This modification is new matter.

C. There is not basis in the originally filed specification for modifying the claimed concentration of lipophilic monomer in the phase change material to recite “about” prior to “10%” in claim 31. This modification is new matter.

D. There is not basis in the originally filed specification for modifying the claimed lipophilic monomer over the waterborne polyurethane to recite “about” prior to “45%” in claim 32. This modification is new matter.

E. There is not basis in the originally filed specification for the instant claim 33, particularly regarding the newly established scope of the waterborne polyurethane created by “comprises”. Urethanes are thereby now encompassed which were not described in the originally filed specification. The issue is not what is well known or what is taught by the cited Bayer reference. The Bayer reference argued is not incorporated by reference into the specification. The issue is what the applicant considered their invention to be at the time of filing. The originally disclosed invention does not make it clear that the applicant considered the newly recited material to be their invention nor that they had possession of the newly added scope at the time of filing. The new matter rejection is therefore maintained over the applicant’s arguments.

F. There is not basis in the originally filed application for the new claim 34, particularly the newly included sulfonate functional groups not previously described in the originally filed specification. The applicant’s arguments do not address the newly encompassed

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alkyl sulfonates which cannot form salt groups, at least, as well as any other sulfonate functional groups that cannot form salt groups.

G. There is not basis in the originally filed specification for the lipophilic monomer is isocyanurate of 1,6-hexamethylene diisocyanate, which can react with the waterborne polyurethane to form shells of the microcapsules". No probative evidence is seen that melamine is no lipophilic overall even if it has some hydrophilic character. Most importantly, the instant specification does not disclose lipophilic monomer is "isocyanurate of 1,6-hexamethylene diisocyanate, which can react with the waterborne polyurethane to form shells of the microcapsules" with the full scope of the instantly claimed invention, i.e. with all of the other possible components of the instant claims.

4. Claims 26-34 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action:

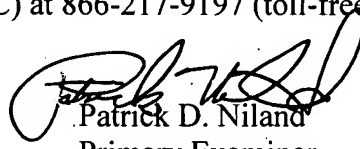
Xing is representative of the closest prior art considered by the examiner. While there are numerous references relating to microcapsule compositions containing wax and polyurethane or its intermediate reactants, the prior art does not disclose the instantly claimed combinations of ingredients and amounts thereof to the extent that these amounts can be determined. The examiner has considered the overlap between phase change materials and the other materials in the instant claims given that they can all change phases. But, even considering this reading of the claims, the examiner sees no prior art disclosure of the instantly claimed inventions nor teachings which render the instant claims 26-34 obvious.

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick D. Niland whose telephone number is 571-272-1121. The examiner can normally be reached on Monday to Thursday from 10 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Patrick D. Niland  
Primary Examiner  
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